

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference. 22183-00002-WO	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/US04/20989	International filing date (day/month/year) 01 July 2004 (01.07.2004)	Priority date (day/month/year) 01 July 2003 (01.07.2003)	
International Patent Classification (IPC) or national classification and IPC IPC: F41H 5/04 (2007.01) USPC: 89/36.04			
Applicant ANTIBALLISTIC SECURITY AND PROTECTION INC.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>4</u> sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 29 April 2005 (29.04.2005)		Date of completion of this report 29 July 2008 (29.07.2008)	
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer <i>J. Woodrow Eldred</i> J. Woodrow Eldred Telephone No. 703-306-4177	

Form PCT/IPEA/409 (cover sheet)(April 2007)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US04/20989

Box No. I Basis of the report

1. With regard to the **language**, this report is based on:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3(a) and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4(a))
 - ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☐ the international application as originally filed/furnished
- ☒ the description:
 pages 1-29 as originally filed/furnished
 pages* NONE received by this Authority on _____
 pages* NONE received by this Authority on _____
- ☒ the claims:
 pages 30-43 as originally filed/furnished
 pages* NONE as amended (together with any statement) under Article 19
 pages* 2-5 received by this Authority on 23 May 2007 (23.05.2007)
 pages* NONE received by this Authority on _____
- ☒ the drawings:
 pages 1/26-26/26 as originally filed/furnished
 pages* NONE received by this Authority on _____
 pages* NONE received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☒ the claims, Nos. 31-93
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to the sequence listing (*specify*): _____

5. ☐ This report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 70.2(e)).

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US04/20989

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has, within the applicable time limit:
- ☐ restricted the claims.
 - ☐ paid additional fees.
 - ☐ paid additional fees under protest, and, where applicable, the protest fee
 - ☐ paid additional fees under protest but the applicable protest fee was not paid
 - ☐ neither restricted the claims nor paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:
- ☒ complied with.
 - ☐ not complied with for the following reasons:

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☐ all parts
- ☐ the parts relating to claims Nos. _____

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US04/20989**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)

Claims 1-30 YES

Claims _____ NO

Inventive Step (IS)

Claims 1-30 YES

Claims _____ NO

Industrial Applicability (IA)

Claims 1-30 YESClaims NONE NO

2. Citations and Explanations (Rule 70.7)

Claims 1-30 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest the claimed armored apparatus and method, specifically the particular layer structure of the armor in combination with the particular means of mounting the armor.

Claims 1-30 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

1. An apparatus for an antiballistic/anti-forced entry armored panel for mounting on a structure, comprising:

- a plurality of tracks mounted to the structure;
- a first panel attached at a top and bottom portion to the plurality of tracks;
- a first set of Aramid-Fiber sheets attached to a first side of the first panel;
- a second set of Aramid-Fiber sheets attached to the first set of Aramid-Fiber sheets;
- a first backer board attached to the second set of Aramid-Fiber sheets;
- a layer of tiles attached to the first backer board;
- a second backer board attached to the layer of tiles;
- a second panel attached to the second backer board and mounted at the top and bottom to the plurality of tracks;
- a hardened steel mesh attached to the second panel by at least one of seaming and continuous welding;
- horizontal steel frame members attached to the hardened steel mesh by welding;
- at least one of horizontal rebars, spacers and fasteners attached to the hardened steel mesh by tack welding, located at least at the top and bottom of the second panel and at equally spaced at intervals between the top and bottom of the second panel;
- a stucco mesh attached to the at least one of horizontal rebars, spacers and fasteners by welding;
- a plurality of lips mounted to the plurality of tracks and spaced at intervals along edges of the stucco mesh;
- high strength stucco applied to the stucco mesh; and
- an interior surface attached to a first side of the first panel,

wherein at least one of self-tapping screws, fasteners and welding are used for mounting the plurality of tracks, first panel, second panel and plurality of lips, and at least one of adhesives and tape are used for attaching the Aramid-Fiber sheets, backer boards, layer of tiles and interior surface.

2. The apparatus of claim 1, wherein the structure is at least one of a concrete floor, steel frame floor, ceilings, walls, columns and a vehicle.

3. The apparatus of claim 2, wherein the first panel and second panel are at least one of a polystyrene steel panel and a steel stud structural element.

4. The apparatus of claim 3, wherein the first panel has a thickness in the range from 3-1/2" to 7-1/2".

5. The apparatus of claim 4, wherein at least one of the first panel and second panel is insulated.

6. The apparatus of claim 5, wherein the first set of Aramid-Fibers and second set of Aramid-Fibers are each at least 4 layers thick.

7. The apparatus of claim 6, wherein the first backer board and second backer board are cementous backer boards.

8. The apparatus of claim 7, wherein the first backer board and second backer board are fireproof backer boards.

9. The apparatus of claim 8, wherein the first backer board and second backer board have a thickness in a range from 1/4" to 1/2".

10. The apparatus of claim 9, wherein the layer of tiles is made from individual tiles.

11. The apparatus of claim 10, wherein at least one of quarry tiles and paver tiles are used to form the layer of tiles.

12. The apparatus of claim 11, wherein the layer of tiles has a thickness from 1/4" to 1/2".

13. The apparatus of claim 12, wherein the exterior surface is made of gypsum board that has a thickness of 5/8".

14. The apparatus of claim 13, wherein the adhesives are at least one of polyurethane and urethane.
15. The apparatus of claim 13, wherein the tape is at least one of double-stick tape, double coated acrylic foam tape and adhesive transfer tape.
16. A method for making an antiballistic and anti-forced entry armored panel for mounting on a structure, comprising:
- mounting a plurality of tracks on the structure;
 - mounting a top and bottom of a first panel to the plurality of tracks;
 - attaching a first set of Aramid-Fiber sheets to the first panel;
 - attaching a second set of Aramid-Fiber sheets to the first set of Aramid Fiber sheets;
 - attaching a first backer board to the second set of Aramid-Fiber sheets;
 - attaching a layer of tile to the first backer board;
 - attaching a second backer board to the layer of tiles;
 - attaching a second panel to the second backer board;
 - mounting a top and bottom portion of the second panel to the plurality of tracks;
 - at least one of seaming and continuous welding a hardened steel mesh to the second panel;
 - welding horizontal steel frame members to the hardened steel mesh;
 - tack welding at least one of horizontal rebars, spacers and fasteners at least at the top and bottom of the second panel and at equally spaced intervals between the top and bottom of the second panel;
 - tack welding stucco mesh to the at least one of horizontal rebars, spacers and fasteners;

mounting a plurality of lips at intervals spaced along edges of the stucco mesh to the plurality of tracks;

applying high strength stucco to the stucco mesh to form an exterior surface;

and

attaching an interior surface to a first side of the first panel,

wherein at least one of self-tapping screws, fasteners and welding are used for mounting the plurality of tracks, first panel, second panel and plurality of tracks, and at least one of adhesives and tape are used for attaching the Aramid-Fiber sheets, backer boards, layer of tiles and interior surface.

17. The method of claim 16, wherein the structure is at least one of a concrete floor, steel frame floor, ceilings, walls, columns and a vehicle.

18. The method of claim 17, wherein the first panel and the second panel are at least one of a polystyrene steel panel and a steel stud structural element.

19. The method of claim 18, wherein the first panel has a thickness in the range from 3-1/2" to 7-1/2".

20. The method of claim 19, wherein the first panel and second panel are insulated.

21. The method of claim 20, wherein the first set of Aramid-Fibers and second set of Aramid-Fibers are each at least 4 layers thick.

22. The method of claim 21, wherein the first backer board and second backer board are cementous backer boards.

23. The method of claim 22, wherein the first backer board and second backer board are fireproof backer boards.

24. The method of claim 23, wherein the first backer board and second backer board have a thickness in a range from 1/4" to 1/2".

25. The method of claim 24, wherein the layer of tiles is made from individual tiles.